# TACTICAL TRAUMA ASSESSMENT GUIDE (TTA)

This TTA guide will aid students and trainers as they perform/demonstrate the assessment of a casualty during the Tactical Field Care phase of Tactical Combat Casualty Care (TCCC).

## CARE UNDER FIRE (CUF)/CARE UNDER THREAT ACTIONS

**Return fire and take cover** – support establishment of fire superiority

**Direct the casualty** to remain engaged as a combatant, if appropriate; or to move to cover and apply self-aid, if able

**Perform a casualty drag/carry** to move an unresponsive or immobile casualty to cover or to a secure site as the tactical situation permits

**Extract casualties** from the burning source and move them to relative safety, **stop the burning** process as necessary

**Address life-threatening bleeding: Apply high and tight** limb tourniquet using the casualty's Joint First Aid Kit and supplies

**Stop life-threatening external hemorrhage if tactically feasible:**

a. Direct casualty to control hemorrhage by self-aid if able.
b. Use a CoTCCC-recommended limb tourniquet for hemorrhage that is anatomically amenable to tourniquet use.
c. Apply the limb tourniquet over the uniform clearly proximal to the bleeding site(s). If the site of the life-threatening bleeding is not readily apparent, place the tourniquet "high and tight" (as proximal as possible) on the injured limb and move the casualty to cover.

# TACTICAL FIELD CARE (TFC) ACTIONS

## GENERAL ACTIONS

**Establish security** perimeter/maintain tactical situational awareness

**Triage casualties** as required

**Use body substance isolation** precautions, if tactical situation permits


**Assess responsiveness** using the AVPU (alert, verbal, pain, unresponsive) process and mental status. ***If unresponsive***, assess for presence of carotid pulse and respirations, and if absent, respond in accordance with the tactical environment

***If unresponsive*** with pulses and respirations or if responsive with an altered mental status, take weapons/communication equipment from casualties

**Communicate with casualty** throughout the tactical trauma assessment process

**FOLLOW THE MARCH PAWS** sequence to perform the rest of the casualty assessment

M A R C H P A W S


### ASSESS AND TREAT MASSIVE HEMORRHAGE

- Assess for **unrecognized hemorrhage** and **control all sources** of bleeding
- Apply a tourniquet directly to the skin, 2–3 inches above the bleeding site, if not previously done in CUF
- Apply a second tourniquet side-by-side, proximal to the first, if bleeding is not controlled with the initial tourniquet
- Assess effectiveness of previously placed tourniquets, if ineffective, tighten tourniquets further; if still bleeding, apply second tourniquet proximal to first or apply a deliberate tourniquet 2–3 inches above the bleeding site
- If wound or wounds is not amenable to a limb tourniquet (neck, axillary and/or inguinal wounds, etc.), apply hemostatic dressing/adjuncts (for hemostatic dressing(s) hold pressure for 3 minutes)
- **Perform a blood sweep** (neck, axillary, and inguinal regions, anterior and posterior trunk, and all extremities) to exclude unrecognized life-threatening bleeding sources
- When appropriate, **apply junctional hemorrhage control** techniques using a wound packing or a junctional tourniquet
- Perform initial assessment for hemorrhagic shock (altered mental status in the absence of brain injury and/or weak or absent radial pulse) and consider immediate initiation of shock resuscitation effort

# TACTICAL FIELD CARE ACTIONS *continued*

## A

### ASSESS AND SECURE THE AIRWAY

- **If conscious allow casualty** to assume any position of comfort that facilitates breathing and protects the airway
- For an unconscious casualty without airway obstruction place in the recovery position. If needed use the head tilt chin lift or jaw thrust maneuver to open airway.
- If the casualty is unconscious or semi-conscious, insert a nasopharyngeal **airway (NPA)** or **extraglottic** if indicated
- **For an unconscious casualty with an obstructed or impending obstructed airway clear any excess secretions** using mechanical or manual suctioning, if indicated
- In an unconscious casualty with an obstructed airway insert an **extraglottic airway**
- If previous measures are unsuccessful, in an unconscious casualty with upper airway obstruction perform a **cricothyroidotomy** and secure it
- Monitor the casualties pulse oximetry to help assess airway patency

## R

### ASSESS RESPIRATION

- **Remove body armor**
- **Assess for signs of tension pneumothorax**
- **Inspect torso for wounds** (front and back)
- **Assess breathing**, initiate pulse oximetry (if available)
- **Apply a vented chest seal** to all open chest wound(s)
- If present, burp and/or remove and reapply any chest seal previously placed
- If present without chest seal, or if chest seal burp did not resolve tension pneumothorax signs, perform needle decompression of the chest (NDC)
- Reassess to confirm NDC was successful
- **Support with manual ventilations** (bag valve mask, if available) if respiratory effort is inadequate
- If no injuries, drape body armor over the casualty's torso

## TACTICAL FIELD CARE ACTIONS *continued*

### C ASSESS CIRCULATION

- **Assess for pelvic fracture**, and if suspected, use a CoTCCC-recommended pelvic compression device
- **Expose wound(s)** and **reassess** any previously applied tourniquets to determine if a tourniquet is indicated
  - If ineffective, tighten further or place and tighten an **additional tourniquet** directly above and next to the deliberate tourniquet
  - If indicated, and time permits, convert the **high and tight tourniquet** to a **deliberate** tourniquet (2–3 inches above the wound)
- If tourniquet was not indicated, convert **high and tight tourniquet and/or junctional tourniquet** to other bleeding control means (wound packing and pressure bandage)
- **Expose** and **reassess any previously placed tourniquets**, clearly mark all tourniquets with the time of tourniquet application
- **Treat any significant nonpulsatile bleeding with hemostatic agent (hold pressure for 3 minutes) and apply a pressure bandage**
- **Reassess junctional (neck, axillary, inguinal) wound(s) packing, if present**
- **Assess for hemorrhagic shock** (checking for radial pulses)
  - If radial pulse is present with normal mental status and significant injuries, insert saline lock (If vascular access is needed but not quickly obtainable via the IV route, use the IO route)
  - If altered mental status in the absence of brain injury and/or weak or absent radial pulse:
    - Establish IV or IO
    - Administer tranexamic acid by slow IV/IO push, as well if the casualty has signs or symptoms of significant TBI or has altered metal status associated with blast injury or blunt trauma
    - Administer blood products, giving 1 gm of calcium after the first unit and continuing reassessment until a palpable radial pulse, improved mental status, or systolic BP of 100 mmHg is present
- **Assess for refractory shock** if not responding to fluid resuscitation and consider untreated tension pneumothorax as possible cause (NDC, if indicated)

**NOTIFY TACTICAL LEADER IF CASUALTY REQUIRES EVACUATION**
(lines 3, 4, 5 from MEDEVAC request, at a minimum)

## TACTICAL FIELD CARE ACTIONS *continued*

### PREVENT AND ACTIVELY/PASSIVELY TREAT HYPOTHERMIA

- **Minimize casualty exposure** to the environment
- **Employ active warming** measures, if available
- **Enclose the casualty** with an exterior impermeable enclosure bag

### ASSESS FOR HEAD INJURY

- Check for signs and symptoms of head and/or penetrating eye injury
- Prevent secondary head injury by treating hypoxia and hypotension
- Manage any eye injury(ies) appropriately
  - Perform a visual acuity test; **cover eye injury(ies) with a rigid eye shield(s**
  - **Administer oral antibiotic** from Combat Wound Medication Pack (CWMP) for penetrating injury(ies)
- Time permitting, review Military Acute Concussion Evaluation 2 screening questions
- Manage any head injury(ies) appropriately

**COMMUNICATE** casualty status to other medical personnel (as appropriate)

**Reassess prior interventions (M/A/R/C/H)**

**PERFORM M A R C H SEQUENCE IN THE CORRECT ORDER**

**INITIATE ELECTRONIC MONITORING** if indicated and equipment is available

### CONTROL PAIN

- Check for drug allergy(ies) before administration
- Disarm casualties before administering any drug that can alter mental status
- Administer appropriate pain management
  - CWMP (acetaminophen and meloxicam) analgesics for conscious casualty who can swallow
  - Oral transmucosal fentanyl citrate (OTFC), for a casualty with mild to moderate pain, not in shock or respiratory distress
  - Ketamine IV/IO for moderate to severe pain for a casualty in shock or respiratory distress (may repeat every 20 min for severe pain)
  - Ketamine 50-100 mg (or 0.5-1 mg/kg) IM or IN
    - Repeat doses q20-30 min prn for IM or IN
- For nausea or vomiting, administer ondansetron
- Administer naloxone, as indicated for opioid overdoses
- Document a mental status exam using the AVPU method prior to administering opioids or ketamine.

## TACTICAL FIELD CARE ACTIONS *continued*

### A — ADMINISTER ANTIBIOTICS

- Check for drug allergy(ies) before administration
- Administer CWMP antibiotics (moxifloxacin) to conscious casualty able to swallow for all open combat wounds
- If unable to take oral meds (shock, unconsciousness), give ertapenem IV or IM

### W — TREAT ADDITIONAL WOUNDS

- Reassess any and all medical interventions
- Inspect, assess, and treat burns with dry, sterile dressings and hypothermia prevention
- Assess for other wounds and, if indicated, apply dressing(s) for abdominal evisceration(s), dressing(s) to stump(s), dressing(s) to any impaled object(s)

### S — SPLINT ANY FRACTURES WITHOUT DISRUPTING ANY IMPALED OBJECTS

### RESUSCITATION ON THE BATTLEFIELD FOR VICTIMS FO BLAST OR PENETRATING TRAUMA WHO HAVE NO PULSE, NO VENTILATIONS, AND NO OTHER SIGNS OF LIFE WILL NOT BE SUCCESSFUL AND SHOULD NOT BE ATTEMPTED

- Perform bilateral needle decompression of the chest for a casualty with torso trauma or polytrauma who have no pulse or respirations to ensure the casualty does not have a tension pneumothorax prior to discontinuation of care

### COMMUNICATE

- Communicate with the casualty, if possible
- Communicate with tactical leadership and report lines 3, 4, and 5 of the MEDEVAC report (if not already done)
- Communicate/transmit the MEDEVAC information with the evacuation system and arrange for Tactical Evacuation Care
- Communicate with other medical providers and relay MIST report

## TACTICAL FIELD CARE ACTIONS *continued*

**PERFORM A DETAILED EXAMINATION AND SECONDARY ASSESSMENT**,
if time and tactical situation permit

**DOCUMENT ALL FINDINGS AND TREATMENTS ON A DD FORM 1380 TCCC CASUALTY CARD**
and attach it to the casualty

**PREPARE FOR EVACUATION**

- Place and secure casualty on evacuation device, and attach DD FORM TCCC Casualty Card onto casualty if not done already
- Secure all loose bandages, equipment, blankets, etc.
- Secure hypothermia prevention wraps/blankets/straps
- Secure litter straps as required; consider additional padding, as needed
- Provide instructions to ambulatory casualties as needed
- Stage casualties for evacuation and identified litter team(s)
- Maintain security/safety at the evacuation point